

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018109**Date Inspected:** 10-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhao Chen Sun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** TOWER**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 10, TOWER GRILLAGE COVER PLATE (NWIT # 07303)

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of an area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

SSD1-TL5-1B-F-48A/B, 66A/B, 44A/B, 61A/B, 58A/B, 78A/B, 50A/B, 72A/B, 42A/B, 75A/B, 63A/B, 59A/B

This Quality Assurance (QA) Inspector observed the following work in progress:

TOWER JETTY

WEST TOWER LIFT 4, SKIN "E" BACKFILL PLATE REPAIR (T-WR3740)

SMAW welding of weld joint 006 located on WSD1-FESA4-4B/F.

Welder is identified as 040690. ZPMC QC is identified as Mr. Sun Zi Wang.

The welding variables recorded by QC appeared to comply with WPS-485-SMAW-2G(2F)-REPAIR-1.

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### WEST TOWER LIFT 4, SKIN "E" BACKFILL PLATE REPAIR (T-WR3741)

SMAW welding of weld joint 007 located on WSD1-FESA4-4B/F.

Welder is identified as 040690. ZPMC QC is identified as Mr. Sun Zi Wang.

The welding variables recorded by QC appeared to comply with WPS-485-SMAW-2G(2F)-REPAIR-1.

Attached photograph provide additional details.

### SOUTH TOWER LIFT 4, 127M ELEVATION, DOUBLER OPENING PLATE

During random in process inspection this QA inspector observed that, ZPMC personnel were performing welding by SMAW process for the parts like door hinges, pad lock, L-handle and stopper of doubler opening plate; on skin A of South tower lift 4 at 127M elevation. The weld numbers are reviewed as DA4-1-001~007-S-127M. Welder is identified as 057220. ZPMC QC is identified as Mr. Sun Zi Wang. The welding variables recorded by QC appeared to comply with WPS-B-P-2112/2113/2114. Attached photograph provide additional details.

### EAST TOWER LIFT 4, 139M ELEVATION, DOUBLER OPENING PLATE

During random in process inspection this QA inspector observed that, ZPMC personnel were performing welding by SMAW process for the parts like door hinges, pad lock, L-handle and stopper of doubler opening plate; on skin A of East tower lift 4 at 139M elevation. The weld numbers are reviewed as DA4-1-001~007-E-139M. Welder is identified as 202354. ZPMC QC is identified as Mr. Sun Zi Wang. The welding variables recorded by QC appeared to comply with WPS-B-P-2112/2113/2114. Attached photograph provide additional details.

### TOWER LIFT 4, 119M ELEVATION, BACKFILL PLATE

During random in process inspection this QA inspector observed that, ZPMC NDT personnel were performing Ultrasonic Testing (UT) on the weld joints of backfill plate of tower lift 4. During inspection ZPMC NDT personnel found nonconforming UT class "A" rejectable indications. Those indications are clearly marked on the components. The weld designations are reviewed as follows. Attached photograph provide additional details.

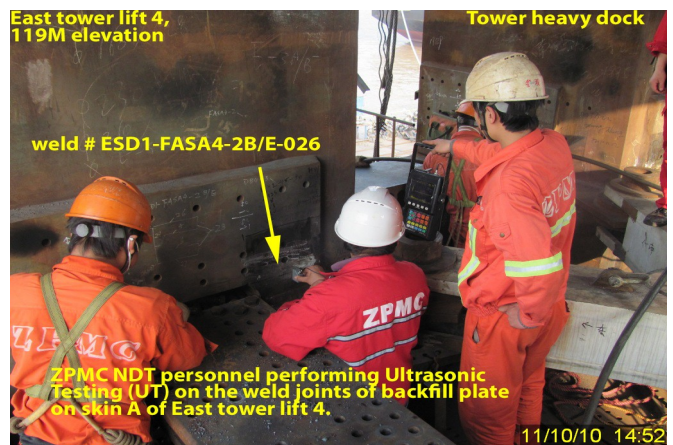
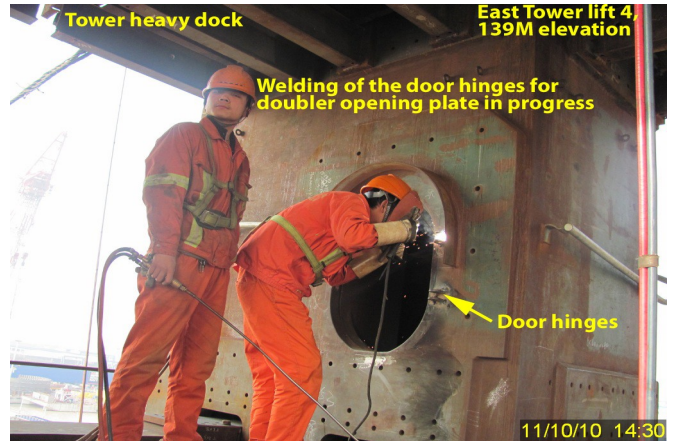
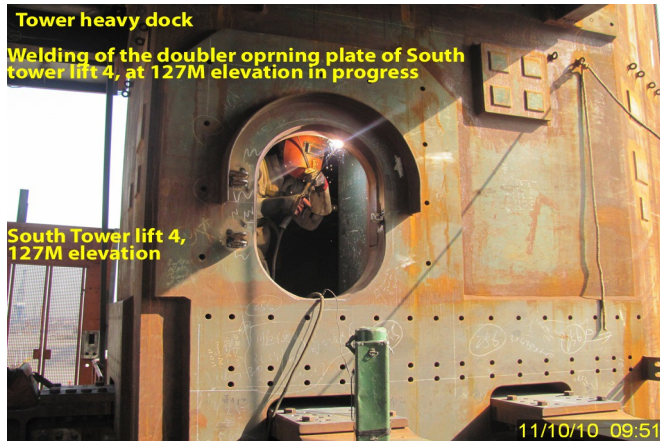
ESD1-FASA4-2B/E-005, 006, 026, 027

NSD1-FASA4-1B/E-014, 015, 016, 017

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Thomas Ho - 150002048250, who represents the Office of Structural Materials for your project.

**Inspected By:** Gaikwad,Umesh

Quality Assurance Inspector

**Reviewed By:** Clifford,William

QA Reviewer